

## **An Assessment of the Determinants of Share Price in Nigeria: A Study of Selected Listed Firms**

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**Abstract:** This study examined the determinants of share prices in the Nigerian stock exchange market. To achieve the objective of this study, a total of 30 listed firms in the Nigerian stock exchange market were selected and analyzed for the study using the judgmental sampling technique. Also, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were used for the study. The paper basically modelled the effects of financial performance, dividend payout and financial leverage on the share price of listed firms operating in the Nigerian stock exchange market using the regression analysis method. The study as part of its findings observed that there is a significant positive relationship between firms' financial performance and the market value of share prices of the listed firms in Nigeria. Consequently, the paper concludes that firms' financial performance, dividend payouts and financial leverage are strong determinants of the market value of share prices in Nigeria.

**Keywords:** Nigeria; Dividend Payout; Financial Leverage; Financial Performance; Share Price

**JEL Classification:** G15

### **1 Introduction**

According to Nwude (2004), the capital market is a market for securities, where business enterprises and governments can raise long-term funds. It is defined as a market in which money is provided for periods longer than a year, as the raising of short-term funds takes place on the money market. The capital market includes the stock market (equity securities) and the bond market (debt). Basically, financial regulators oversee the capital markets in their designated jurisdictions to ensure that investors are protected against fraud, among other duties (Onoh, 2002).

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The stock market has become an important market playing a vital role in economic prosperity that fostering capital formation and sustaining economic growth. Stock markets are more than a place to trade securities; they operate as a facilitator between savers and users of capital by means of pooling of funds, sharing risk, and transferring wealth. Stock markets are essential for economic growth as they insure the flow of resources to the most productive investment opportunities (Kurihara, 2006).

Over the years, the stock market indices have witnessed significant crashes in both developed and emerging markets. The most commonly publicized instance was the 1987 Wall Street crash in the United States where the Dow Jones industrial average fell by 22.6%, the largest one-day decline in recorded stock market history. This significant crash was not confined to the United States only, but spread to other developed systems. By the end of October 1987, stock markets in Australia had fallen to about 41.8%, Canada by 22.5%, Hong Kong by 45.8% and the United Kingdom by 26.4 % (Nwokoma, 2004). These collapses nevertheless, have generated a lot of research in developed economies on the extent to which stock market indices really reflect economic fundamentals. However, the same is not true in developed economies like Nigeria where the pricing of securities particularly equities in the secondary market has been the subject of debate. Criticism has come not only from senior executives of quoted companies who at times perceived their shares as undervalued but also from investors generally, experts in security pricing, stockbrokers in other developed exchanges, and other observers of Nigeria capital market.

The failure to understand the issues surrounding share price and its determinants has been the bane of the financial disposition of numerous corporations today. Investor participation in the assets of a company is usually affected by its share price history; which summarizes the quality of operations of the company. It is pertinent to note that after more than thirty five years of trading on the Nigerian stock exchange, brokers are yet to evolve an acceptable and uniform pricing formulae for securities quoted on the exchange. There are instances of brokers justifying movement in the price of a security solely on account of demand or clients' instruction without reference to other parameters of price determination.

In addition, managers of many companies today are ignorant of the effects of board composition on share price (Heaps, 2010). The market is characterised by infrastructural inadequacy, thus, causing delays in effecting transactions between issuing houses, brokers, dealers, registrars, investors and their bank due largely to inadequacy of our postal and telegraphic services. Hence this study will attempt to examine the effect of financial performance, dividend payouts and financial leverage on the share price of firms operating in the Nigerian stock exchange market.

In the light of the aforementioned objective, the remaining part of this paper is structured as follows. Following the introductory section is the review of relevant literature and hypotheses development. The next section then presents the research methodology and econometric model description. Finally, the last section summarizes the main findings and conclusion of the study.

### **Scope of Study**

This study basically seeks to investigate the effects of financial performance, dividend payout and financial leverage on the share price of firms operating in the Nigerian stock exchange market. To achieve the objectives of this study, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were analyzed. In addition, using the judgmental sampling technique, the study considered a total of 30 listed firms in the Nigerian stock exchange market. The choice of these industries arises based on the size, and the decline in the share prices of the stocks of these firms.

## **2. Prior Studies and Hypotheses Development**

Determining share prices is a complex and conflicting task. According to economic theory, the price of any asset is usually determined by the market forces. However, a number of empirical studies have been conducted on the determinants of stock prices. Some of these studies looked at the relationships between stock prices and the factors that could impact on it.

In Kang and Stulz (1997), they examined the determinants of firm stock-price performance from 1990 to 1993 in Japan. During that period of time, the typical firm of Tokyo Stock exchange lost more than half of its value and banks experienced severe adverse stocks shocks. They observed that firms whose debt had a higher fraction of bank loans in 1989 performed worse from 1990 to 1993. This effect is statistically as well as economically significant and holds when we control for a variety of variables that affect performance during this period of time.

Rahman (2006) found a negative correlation between the beta and stock return, which is reason for inefficiency of market. The decomposition of stock price movements is very sensitive to what assumption is made about the presence of permanent changes in either real dividend growth or excess stock return.

Aamir, Qayyum, Nasir, & Khan (2011) studied the effect of dividend payment on stock prices by taking the sample of fifty five companies listed at Karachi Stock Exchange. Results from their study show that dividend yield; earnings per share,

return on equity and profit after tax are positively related to stock prices while Retention Ratio has negative relation with Stock Prices.

Hussainey, Mgbame, & Chijoke-Mgbame (2011) studied the impact of dividend policy on Stock prices. Results of their study show the positive relation between dividend yield and stock price changes and negative relation between dividend payout ratio and stock price changes. Their results further indicated that the firms' Earnings, growth rate, level of debt and size also cause the change in stock price of UK. Similarly, Baker & Powell (2012) used survey technique to take the opinion of Indonesian managers about the factors influencing dividend policy, dividend issues, and explanations for paying dividends. Results of their survey show that Indonesian managers consider stability of earnings and level of current and expected future earnings are the most important determinants of dividend policy.

Nevertheless, while several prior empirical studies from developed economies have shed light on the effect of financial performance, dividend payouts and financial leverage on the share price of firms, the same is not true in developing economies like Nigeria. In addition, findings from prior studies indicate that share price determination is a very much diverse and conflicting area of finance. Every aspect of this phenomenon has disagreement. From the basic philosophy to the econometric models there are different schools of thought. In Nigeria, there is no sufficient literature to explain the contextual features of financial information and stock market. All of these facts create the need for further studies with simple models, large sample data and wider span.

This study therefore tends to fill this gap in literature by examining the relationship between the financial performance of firms and the share price of listed firms in Nigeria. The study in addition, attempted to find whether there is a relationship between dividend payout, financial leverage and the share price of the sampled firms.

### **Development of Hypotheses**

The hypotheses to be tested in this study are stated below in their null form:

- 1) ***H<sub>1</sub>**:The financial performance of firms is not a significant determinant of share price of listed firms in Nigeria.*
- 2) ***H<sub>2</sub>**:There is no significant relationship between firms' dividend payout and the share price determination of listed firms in Nigeria*
- 3) ***H<sub>3</sub>**:There is no significant relationship between firms' financial leverage and the share price determination of listed firms in Nigeria.*

### 3. Research Methodology

To achieve the objectives of this study, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were analyzed. This is due to the fact that the Nigerian stock exchange fact book and the corporate annual reports are readily available and accessible. However, using the judgmental sampling technique; a total of 30 listed firms operating in high profile industries in the Nigerian Stock Exchange were selected. This represents 15.5% of the total population. This is however, consistent with the propositions of Krejcie & Morgan (1970) where a minimum of 5% of a defined population is considered as an appropriate sample size in making generalization. The choice of the sampled firms arises based on the size and the decline in the share prices of the stocks of these firms.

Nevertheless, in testing the research hypothesis, the ordinary least square (OLS) was used in the estimation of the regression equation under consideration.

#### Econometric Model Specification:

The following model is used to examine the association between independent and the dependent variables of the listed firms in Nigeria.

$$SP_{it} = f(ROA_{it}, DPO_{it}, LEV_{it}, e_{it}) \quad (1)$$

This can be written in explicit form as:

$$SP_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 DPO_{it} + \beta_3 LEV_{it} + e_{it} \quad (2)$$

#### Where:

$SP_{it}$  = Share Price (MP): Closing market price per common share.

$ROA_{it}$  = Return on Asset is used for firm  $i$  at time  $t$  (in years) to represent firm

Performance proxied by ratio of profit after tax

$DPO_{it}$  = Dividend Payout ratio is measured as the dividend per equity share divided by earnings per share

$LEV_{it}$  = Leverage has been expressed in terms of debt-equity ratio

$e$  = Stochastic or disturbance term.

$t$  = Time dimension of the Variables

$\beta_0$  = Constant or Intercept.

$\beta_{1-3}$  = Coefficients to be estimated or the Coefficients of slope parameters.

## 4 Discussion of Results

**Table 1. Descriptive Statistics of Variables**

Variables	Observations	Mean	Std.	Dev	Min.	Max
SP	30	9.756667		6.034339	0.19	21.2
ROA	30	19.16667		13.14364	0.0	40.18
DPO	30	15.05967		12.65404	-0.3	38.2
LEV	30	10.63067		15.38272	0.02	45.23

*Source: field survey (2012)*

**Table 2. Pearson Correlations Coefficients for Sampled firms**

	SP	ROA	DPO	LEV
SP	1.0000			
ROA	0.9178 0.0000	1.0000		
DPO	0.9198 0.0000	0.8910 0.0000	1.0000	
LEV	-0.8561 0.0000	-0.8186 0.0000	-0.8051 0.0000	1.0000

**Table 3. Anova**

Source	SS	df	MS
Model	958.688309	3	319.56277
Residual	97.295995	26	3.74215366
Total	1055.9845	29	36.4132519

**Table 4. Regression Result**

SPO	Coefficients	Std. Err.	t	P >  t	[95% Cof.	Interval
ROA	0.1684918	0.0649571	2.59	0.015	0.0349705	0.3020131
DPO	0.1971511	0.0653345	3.02	0.006	0.0628541	.3314481
LEV	-0.0874115	0.0424933	-2.06	0.050	-0.1747577	-0.0000654
_CONS	4.487454	1.364051	3.29	0.003	1.683606	7.291301
No. of Obs.	30					
F (3, 26)	85.40					
Prob > F	0.0000					
R-squared	0.9079					
Adj R-squared	0.8972					
Root MSE	1.9345					

**Table 5. Variance Inflation Factor**

<b>Variables</b>	<b>VIF</b>	<b>1/VIF</b>
<b>ROA</b>	5.65	0.177027
<b>DPO</b>	5.30	0.188791
<b>LEV</b>	3.31	0.302007
<b>Mean VIF</b>	4.75	

Findings from the descriptive statistics as presented in table (1) present a mean share price value of about 9.756667 for the firms under consideration. On the other hand; firm performance (ROA), Dividend payouts (DPO) and financial leverage (LEV) maintains an averaged mean distribution value of about 19.16667, 15.05967 and 10.63067 respectively for the sampled listed firms in the Nigerian Stock Exchange market. However, a marathon review of the empirical findings from the Pearson correlation analysis on the relationship between share price and firm performance shows that there is a positive correlation between the financial performance of firms and the share price of listed firms in Nigeria, and it is significant at 1% probability level with a correlation coefficient (r) of 0.09178.

Also, the Pearson correlation analysis result shows that there is a positive correlation between the dividend payouts (proxied by DPO) and the share prices of listed firms in Nigeria and it is also significant at 1% probability level with a correlation coefficient (r) of about 0.9198. On the other hand, findings on the association between firms financial leverage and share price of firms indicates that there is a significant negative association between firms' financial leverage and the share prices of firms listed firms in Nigeria. This is evident with a correlation coefficient of about (r)-0.8561 and it is significant at 1% level.

Furthermore, the test for multicollinearity was carried out before analysing the regression model. According to Field (2000), this test is necessary because multicollinearity can affect the parameters of a regression model. Adeyemi and Fagbemi (2010) suggested that a tolerance value less than 0.1 indicates a serious multi-collinearity problem between the independent variables. Nevertheless, since all values are more than 0.10, there is no issue of multi-collinearity between the independent variables. Also, Myers (1990) suggested that a variance inflation factor (VIF) value greater than 10 calls for concern, however, for this study, the VIF values are less than 10.

In addition, findings from the regression analysis result for the selected firms as depicted in table (4) indicates that from the model, the  $R^2$  which is often referred to as the coefficient of determination of the variables is 0.9079. The R-Squared which is also a measure of the overall fitness of the model indicates that the model is

capable of explaining about 91% of the variability the share prices of firms. This means that the model explains about 91% of the systematic variation in the dependent variable. That is, about 9% of the variations in dividend payout policies of the sampled firms are accounted for by other factors not captured by the model. This result is complimented by the adjusted  $R^2$  (adjusted R-squared) of about 0.8972%, which in essence is the proportion of total variance that is explained by the model.

Similarly, findings from the Fishers ratio (i.e. the F-Statistics which is a proof of the validity of the estimated model) as reflected in table (3), presents a p-value that is less than 0.05 (p-value < 0.05); this invariably suggests clearly that simultaneously the explanatory variable (i.e. firms performance, dividend payouts and financial leverage) are significantly associated with the dependent variable (share price). That is, they strongly determine the behaviour of the market values of share prices.

However, further empirical findings provided in table (4) show that there is a significant positive relationship between firms' financial performance and the market value of share prices of the listed firms in Nigeria. This is evident in the t-statistics value of 2.59 and a  $P > |t|$  (0.015). This outcome basically implies that with all other variable held constant, an increase or a change in the financial performance of firms, say by one percent will on the average bring about a 0.1684918 percent increase in the market price of shares. That is an increase in the financial performance of firms will also lead to a positive improvement in the share prices of listed firms. In essences, we can deduce from this result that the financial performance of firms have a significant positive impact on the market share prices of listed firms in Nigeria. Interestingly, this is in line with the propositions of (Zahir, 1992; Somoye et al, 2009; Sanju and Ramachandran, 2011; Mondal and Imran, 2011) where it was observed that return on assets significantly influences the market value of share prices.

Similarly, further empirical findings provided in table (4) also show that there is a significant positive relationship between firms' dividend payout and the market value of share prices. This is evident in the t-statistics value of (3.02 and the  $P > |t|$  = 0.006). This outcome basically implies that an increase in dividend payout ratio will invariably bring about a significant increase in the market prices of equity shares. This outcome nevertheless corroborates the findings provided in Zahir and Khanna (1982), Chawla and Srinivasan (1987), Zahir (1992), Malakar and Gupta (1999, 2002), Sen and Ray (2003), Sharma and Singh (2006) and Azhagaiah and Priya (2008) where it was observed that dividend payout is a major determinant of share prices.

Finally, empirical findings from the regression analysis on the relationship between firms financial leverage (expressed in terms of debt-equity ratio) indicate that there



is an inverse relationship the financial leverage of firms and the market value of share prices. This is however evident in the t-statistics value of (-2.06 and  $P > |t| = 0.050$ ). This result basically means that with the influence of other variable held constant, as firms financial leverage changes; say by one percent, on average, market price of share changes by -0.0874115 percent in the opposite direction. This result further indicates that firms' financial leverage proxied by debt-equity ratio is a significant determinant of share prices for the sampled listed firms in Nigeria. That is, as the debt content in the capital structure of a firm decreases, its share prices rise and vice versa. This result outcome nevertheless, is in line with the findings of Mondal & Imran (2011), Midani (1991) and Sanju & Ramachandran (2011).

## 5 Conclusion

This study basically examined the effects of financial performance, dividend payouts and financial leverage on the share price of firms operating in the Nigerian stock exchange market. To achieve the objectives of this study, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were analyzed. The study came up with findings that are of salient value to investors and scholars assessing the determinants of share prices in the Nigerian context.

Based on the hypothesis tested, findings from the study revealed that firms' financial performance is a strong determinant of the market value of share prices of the listed firms in Nigeria. That is there is a significant positive relationship between firms' financial performance and the market value of share prices of the listed sampled firms in Nigeria. This outcome nevertheless is consistent with the propositions of Zahir (1992), Somoye et al (2009) and Sanju & Ramachandran (2011). Also, the study revealed that there is a significant positive relationship between dividend payout and share price. That is, firms' dividend payout has a significant influence on the market value of share prices of the listed firms.

Finally, contrary to the findings provided in hypotheses one and two; findings on the third hypothesis revealed that firms' financial leverage proxied by debt-equity ratio has a significant negative influence on the market value of share prices in Nigeria. That is, as the debt content in the capital structure of a firm decreases, its share prices rise and vice versa. This result outcome nevertheless corroborates with the findings of Mondal & Imran (2011), Midani (1991) and Sanju & Ramachandran (2011). This study to this end concludes that firms' financial performance, dividend payouts and financial leverage are strong determinants of the market value of share prices in Nigeria.

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## APPENDIX

### LIST OF SAMPLED LISTED FIRMS

S/N	Selected firms
1	Okomu Oil Palm Plc
2	Presco Plc
3	R.T. Briscoe Nigeria Plc
4	Guinness Nigeria Plc
5	Nigerian Breweries Plc
6	Ashaka Cement Plc
7	Benue Cement Plc
8	Lafarge Cement WAPCO Nigeria Plc
9	Cement Company of Northern Nigeria Plc
10	A. G. Leventis (Nigeria) Plc
11	P. Z. Cussons Nigeria Plc
12	U. A. C. N. PLC
13	Unilever Nigeria Plc
14	Julius Berger Nig Plc
15	Costain Plc
16	Cappa & D'alberto Plc
17	7 - Up Bottling Company Plc
18	Cadbury Nigeria Plc
19	Dangote Sugar Nigeria Plc
20	Flour Mills of Nigeria Plc
21	Nestle Nigeria Plc
22	Nigerian Bottling Company
23	Northern nig. Flour mills plc
24	UTC Nigeria Plc
25	Glaxo- Smithkline Consumer Plc
26	May & Baker nig. Plc
27	Neimeth International Pharma Plc
28	B. O. C. Gases Plc
29	Vita foam (nig.) Plc
30	Beta Glass Company Plc